



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
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Sold Alone

D3391-023
Job Sheet 184422



Part No: D3391-023

Job Qty: 1 ea

Part Name: Mid Tube Assembly



Part Weight: 0 lbs

Status: New

Priority: Medium

Job Created: 10/9/18

Job Tracking No:

Due Date: 11/12/18

Created By: Marie Lajeunesse

Type: SOLD

Description:

Note: DWG REV J SHEET 2 and 7 IPP A 05.10.20 New Issue KJ/EC IPP B IPP C 07.03.20 rev F dwg EC IPP D 07.03.28 re-format EC IPP E 07.10.31 ecn 1053P EC IPP Rev:F ECN 1056 07-11-13 DD verified by: EC IPP Rev:G 08-09-08 new process (ecn 08-510) DD verified by:EC IPP Rev:H 08-09-10 revH as per dwg DD verified by:EC IPP Rev: I 08-11-13 Removed steps per w/o, QC KJ verified by: ec IPP Rev:J add in seq 140 expire date &b# sikaflex DD 10.02.17 verified by:EC

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
90	Start up Operation	1 Ea		11/12/18	0.00	0.00	Start Up Skid tubes-1		
100	Skid tubes	1 pcs		11/12/18	0.88	2.11	Skid tubes-4		
110	QC	1 pcs		11/12/18	0.00	0.00	QC5		
120	HandFinish	1 pcs		11/12/18	0.00	0.38	HandFinish1		
130	QC	1 pcs		11/12/18	0.00	0.00	QC7-2		
140	Skid tubes	1 pcs		11/12/18	0.00	2.11	Skid tubes-4		
150	QC	1 pcs		11/12/18	0.00	0.00	QC5		
160	Skid tubes	1 pcs		11/12/18	0.00	2.11	Skid tubes-4		
170	QC	1 pcs		11/12/18	0.00	0.00	QC10		
180	QC	1 pcs		11/12/18	0.00	0.00	QC5		
185	HandFinish	1 pcs		11/12/18	0.00	0.38	HandFinish2		
191	SprayPaint	1 pcs		11/12/18	0.00	0.91	Spray Paint		
192	Outsource	1 pcs		11/12/18			ATE003-VC		
193	Packaging	1 pcs		11/12/18	0.00	0.00	Packaging2		
200	QC	1 pcs		11/12/18	0.00	0.00	QC14		
230	HandFinish	1 pcs		11/12/18	0.00	0.38	HandFinish4		
240	QC	1 pcs		11/12/18	0.00	0.00	QC5		
250	Packaging	1 pcs		11/12/18	0.00	0.00	Packaging3-1		
260	QC21-SA	1 Ea		11/12/18	0.00	0.00	QC21		

Part Op 100 - 1-Cut tube to finish length as per Dwg D3391 2-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1
Descriptions: fwd saddle hole on one side only as per Dwg D3391 3-Open aft saddles and GHW holes to Ø0.4375" except for fwd saddle
holes 4-Remove .030" from Fwd indexing Ridge as per Dwg D3391 5-Remove indexing ridge on Fwd & Aft end of
skid tube as per Dwg D3391 6-Deburr, scibe batch # on aft end. 7- Locate D3391-021 in D3391-023 at 9:00" (see view
F-P) 8- Transfer drill one fwd saddle hole only to .188" dia; transfer drill all remaining fwd saddle holes using DT 8149
locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect alignment, open up previously transfer
drilled pilot holes in D3391-023/-021 using drill press. ON FIRST SIDE ONLY drill out 2nd and forth fwd saddles holes to
0.500" as per ON 2ND SIDE ONLY ream out 2nd and forth saddle hole to 0.499". D3391-021
BATCH: *N/A* 9- Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.375" holes with paint marker,
DO NOT DRILL HOLES #3-19-20 FROM FWD END OF JIG Locating from two fwd wearplate holes in D3391-023
drill remaining 6 wearplate holes in D3391-021 using DT8937 10- Open wearplate holes of D3391-023 assembly detail
section Q-Q to Ø0.375" (10 holes) as per Dwg D3391 Open wearplate holes of D3391-023 assembly detail section H-H to

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____	

Ø0.297" (20 holes) as per Dwg D3391 Deburr and blow out all chips from inside tube, scribe

140 - 1-Open float bag holes as per dwg 2-C'sink float bag holes as per dwg 3- Prepare tube for welding 4-Bond web in place as per Dwg D3391 & QSI 015. Adhere for 12 hours) A/R Sikaflex exp: 138949 batch#: March 2014

NOTE: ENSURE WEB IS INSERTED IN AFT END OF TUBE

160 - 1-Weld crossbolt spacer as per dwg D3391 & QSI 004 2-grind weld flush

185 - Re-alodine

197 - PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: POO-1588 PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT: _____

230 - 1-Install Inserts as per Dwg

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D2500-1-100	Skidtube Extrusion	1 Ea (1 ea)	90-Start up Operation	B163253
D3389-1	Web	1 Ea (1 ea)	140-Skidtubes	S117267
D3681-1	Spacer	5 Ea (5 ea)	160-Skidtubes	S103210
ALS4-1032-130	Rivnut	20 Ea (20 ea)	230-HandFinish	S007279
D3591-1	Bushing	2 Ea (2 ea)	230-HandFinish	S122431

M. U. 006288

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
90-Start up Operation	D2500-1-100	1	32	0
140-Skidtubes	D3389-1	1	11	0
160-Skidtubes	D3681-1	5	257	0
230-HandFinish	ALS4-1032-130	20	12,131	0
	D3591-1	2	11	0

Part Specifications

DART
AEROSPACE

Container No: S118761



Part: D3391 - 023

Job No: 184422

Serial No/Batch: S118761

Revision: J

Inspector:

Exp Date:

Instructions: Various STC's

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

found.

Plex 10/9/18 12:24 PM Dart.lajeunesse.marie

Date: 10/31/18

DQA: _____ Date: _____

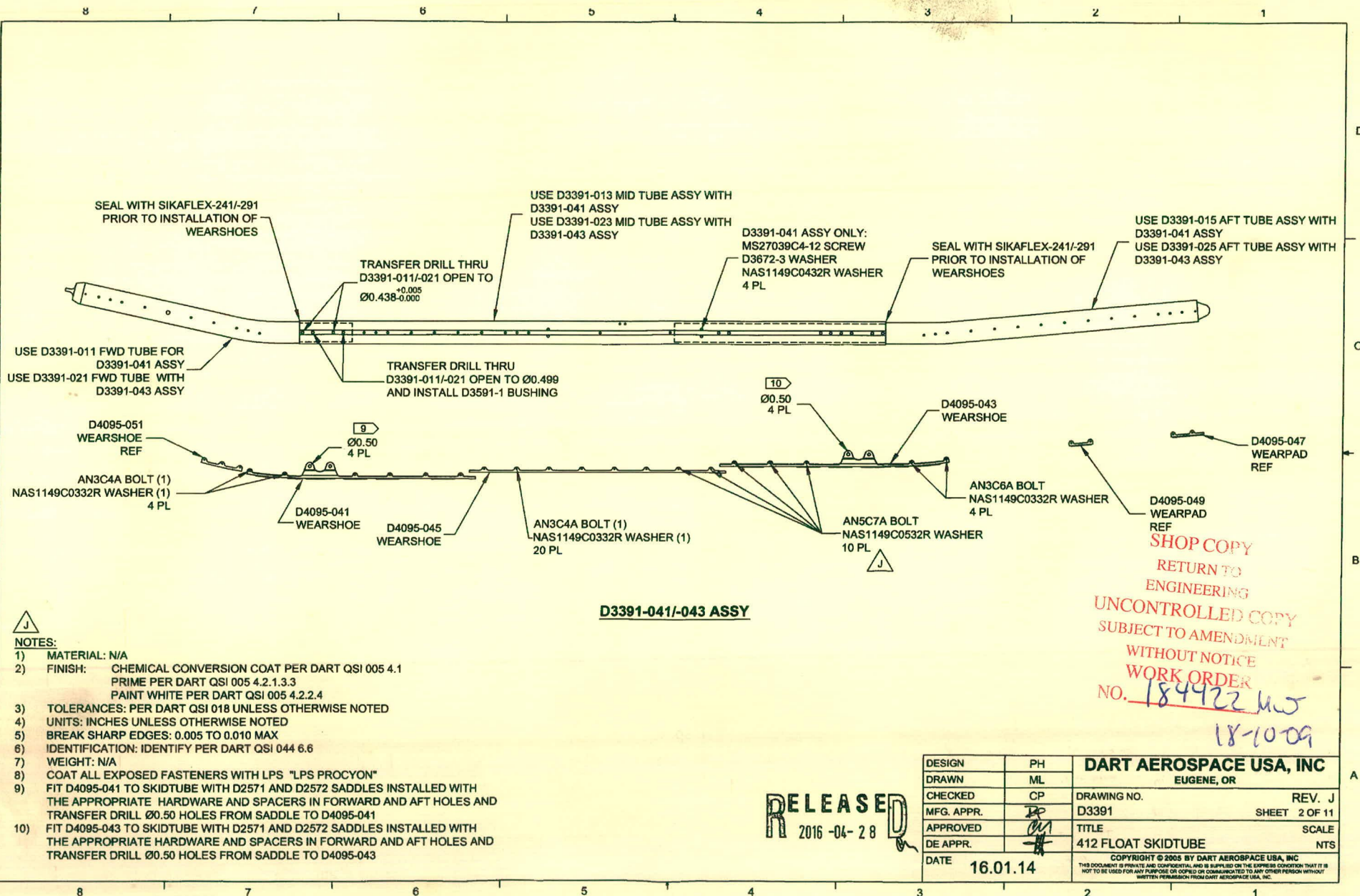


WORK ORDER NON-CONFORMANCE / UPDATE

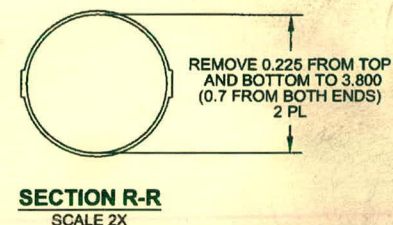
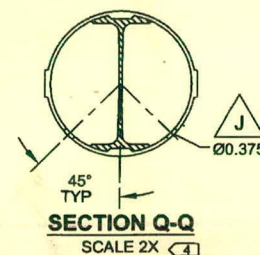
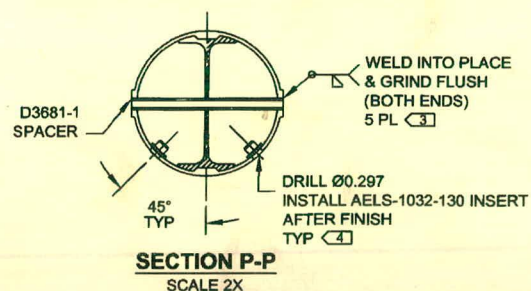
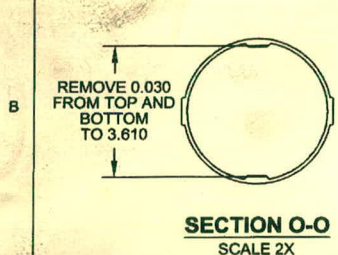
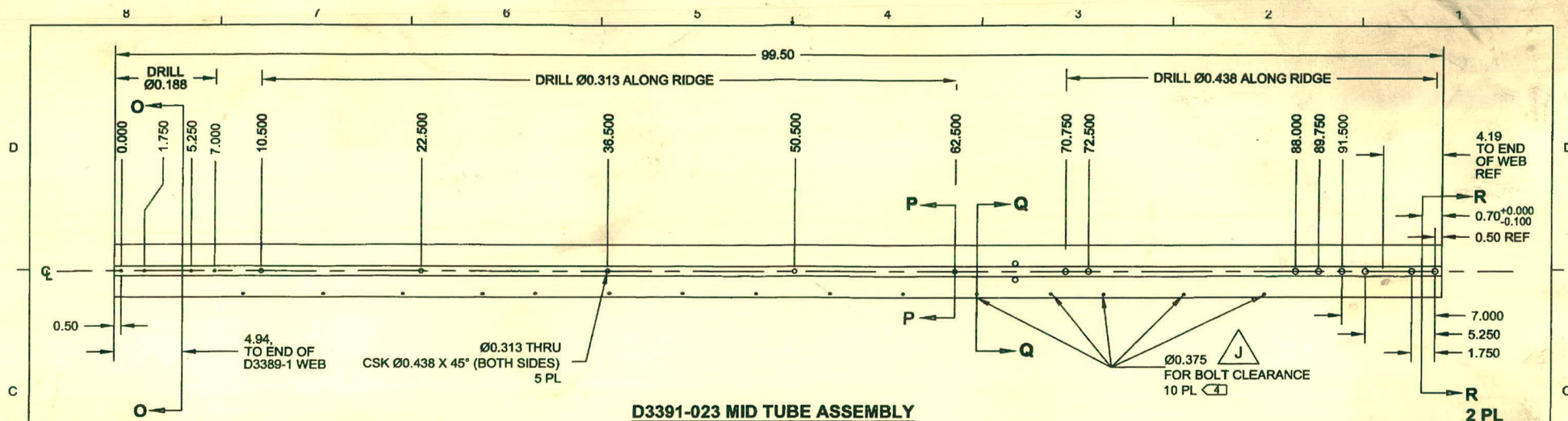
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					



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 SUBJECT TO AMENDMENT
 WITHOUT NOTICE
 WORK ORDER
 NO. 184422 MJS
 18-10-09



D3391-023 MID TUBE ASSEMBLY PARTS LIST

QTY -023	PART NUMBER	DESCRIPTION
X	D3391-023	MID TUBE ASSEMBLY
1	D2500-1-100	EXTRUSION
1	D3389-1	WEB
5	D3681-1	SPACER
20	AELS-1032-130	INSERT



D3391-023 MID TUBE ASSEMBLY

- 1) MATERIAL: MAKE FROM D2500-1-100
- 2) INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015
- 3) WELDING: PER DART QSI 004
- 4) USE DART DRILL TEMPLATE DT8217 TO LOCATE AND DRILL Ø0.297 AND Ø0.375 HOLES FOR WEARSHOE INSERTS AND NUTPLATES, CBOR AS NOTED AND INSTALL INSERT/NUTPLATES EXCEPT WHERE INDICATED.

DESIGN	PH	DART AEROSPACE USA, INC	
DRAWN	ML	EUGENE, OR	
CHECKED	CP	DRAWING NO.	REV. J
MFG. APPR.	<i>Be</i>	D3391	SHEET 7 OF 11
APPROVED	<i>Be</i>	TITLE	SCALE
DE APPR.	<i>Be</i>	412 FLOAT SKIDTUBE	NTS
DATE	16.01.14	COPYRIGHT © 2005 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

RELEASED
2016-04-28



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER **PO041598**

Supplier: ATE003-VC
Atelier Debosselage
358 Principale
Calumet
QC
J0V 1B0 Canada
Phone: 819 242 5633

PO No: PO041598
PO Date: 11/5/18
Due Date: 11/8/18
Purchase Order Revision:
Revision Date:
Ship-To Contact: Phone:

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground
Pynt Terms: Net 30
Freight Terms:
Special Comments:

Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (CAD)	Extended Price
1	184660	D350-636-014	Skidtube RH, Std Wearplates, DART (Apical) Tri-Bag/Air Cruisers Float Comp. : TC STC SH99-7 Issue 2, FAA STC SR00646SE 15/10/28, EASA STC EASA.10033942 11/02/21, BRAZIL 2009S05-01 09/05/08 1- PRIME AS PER DWG AND QSI 005 4.2	Firmed	-	11/8/18	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00
2	185413	D350-636-013	Skidtube LH, Std Wearplates, DART (Apical) Tri-Bag/Air Cruisers Float Comp. : TC STC SH99-7 Issue 2, FAA STC SR00646SE 15/10/28, EASA STC EASA.10033942 11/02/21, BRAZIL 2009S05-01 09/05/08 1- PRIME AS PER DWG AND QSI 005 4.2	Firmed	-	11/8/18	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00
3	184426	D3391-023	PRIME AS PER DWG AND QSI005 4.2.1.3.3 PRIMER BATCH: PAINT AS PER DWG AND QSI005 4.2.2.4 PAINT:	Firmed	-	11/8/18	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00
	184426			Firmed	-	11/8/18	1 pcs	0 pcs	1 pcs	\$225.00/pcs	\$225.00
Sub Total:							2	0	2		\$450.00
Grand Total:											\$900.00



Dart Aerospace Ltd.
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PURCHASE ORDER PO041598

Order Notes

Procurement Quality Clauses

A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Plex 11/5/18 2:30 PM dart.tsimiklis.chrisoula

